

Date 5/3/04 Serial # 101017,737 Priority Application Date _____
 Your Name M. Lewis Examiner # _____
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 In what format would you like your results? Paper is the default. PAPER DISK EMAIL

If submitting more than one search, please prioritize in order of need.

The EIC searcher normally will contact you before beginning a prior art search. If you would like to sit with a searcher for an interactive search, please notify one of the searchers.

Where have you searched so far on this case?

Circle: USPT DWPI EPO Abs JPO Abs IBM TDB

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What relevant art have you found so far? Please attach pertinent citations or Information Disclosure Statements. _____

What types of references would you like? Please checkmark:

Primary Refs ☒ Nonpatent Literature _____ Other _____
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 Teaching Refs ☐ _____

What is the topic, such as the **novelty**, motivation, utility, or other specific facets defining the desired **focus** of this search? Please include the concepts, synonyms, keywords, acronyms, registry numbers, definitions, structures, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract and pertinent claims.

Claims 1-5, 7-10, 21, 23-26,
 + 28-30

Problem: See page lines 8-14

" " 2 " 1-19

" " 3 " 1-5

Solution: " " 4 " 1-15

Staff Use Only

Searcher: HARRISON

Searcher Phone: 28511

Searcher Location: STIC-EIC2800, JEF-4B68

Date Searcher Picked Up: 5-17

Date Completed: 5-17-04

Searcher Prep/Rev Time: 75

Online Time: 70

Type of Search

Structure (#) _____

Bibliographic ☒

Litigation _____

Fulltext ☒

Patent Family _____

Other _____

Vendors

STN ☒

Dialog ☒

Questel/Orbit _____

Lexis-Nexis _____

WWW/Internet _____

Other _____

CAS/STN FILE 'INPADOC, WPIX, HCAPLUS' ENTERED AT 09:41:59 ON 17 MAY 2004

L1 2 S US20030111716/PN
 L2 SEL PLU=ON L1 1- PN PRN: 2 TERMS
 L3 2 S L2

FILE 'WPIX, HCAPLUS' ENTERED

L4 8 S (US5323060 OR JP04056262 OR JP4056262 OR
 JP63128736 OR US5495398 OR US6340846 OR US5521122 OR US5804004) /PN
 L5 17 S LOBIANCO?/IN
 L6 2 S L4 AND L5
 L7 8 S L4
 L8 SEL PLU=ON L7 1- PN: 18 TERMS

FILE 'DPCI' ENTERED

L9 245 S L8/PN.D

FILE 'WPIX' ENTERED

L10 1 S US20030111716/PN
 L11 SEL PLU=ON L10 1- IC MC: 6 TERMS

FILE 'DPCI' ENTERED

L12 245 S L8/PN.D
 L13 3438 S L11
 L14 45 S L13 AND L12
 L15 80 S L12 AND (MCM OR (MULTIPLE OR MULTI OR MULTICHIP OR TWO))
 L16 70 S L12 AND STACK#####
 L17 0 S L12 AND DIEATTACH?
 L18 21 S L12 AND ATTACH?
 L19 35 S L12 AND (WIRE OR WIREBOND##### OR BONDWIRE###)
 L20 13 S L12 AND (COVER##### OR PROTECT##### OR
 BURY##### OR BURIE## OR THERMOSET##### OR ENCAPSUL#####)
 L21 161 S (L14 OR L15 OR L16 OR L17 OR L18 OR L19)
 L22 84 S L12 NOT L21
 L23 SEL PLU=ON L22 1- PRN: 135 TERMS
 L24 SEL PLU=ON L21 1- PRN: 213 TERMS
 L25 13 S L12 AND (SPAC#### OR GAP#### OR THICKNESS#####)
 L26 SEL PLU=ON L25 1- PRN: 19 TERMS

FILE 'WPIX, JAPIO, HCAPLUS' ENTERED

L27 30 S L26
 L28 336 S L24
 L29 269 S L23
 L30 2252 S (ELIMINAT##### OR WITHOUT##### OR NO)(3W) SPACER##
 L31 0 S (L27 OR L28 OR L29) AND L30
 L32 4958 S DIE(2A) ATTACH#####
 L33 1 S L30 AND L32
 L34 278112 S MCM OR MULTICHIP OR MULTIPLE(2W) CHIP OR STACK####
 L35 82 S L30 AND L34
 L36 174 S L32 AND L34
 L37 61898 S (WIRE## OR WIRING)(2A)(ATTACH##### OR INTERCONNECT### OR BOND#### OR BALL OR BALLBOND## OR PAD OR
 BONDPAD##) OR WIREBOND##### OR BONDWIRE###
 L38 17 S (L27 OR L28 OR L29) AND SPACER
 L39 2252 S L30 AND SPACER
 L40 32 S ((L27 OR L28 OR L29) OR (L35 OR L36) OR L38) AND INSULAT#### AND (COVER##### OR PROTECT##### OR
 BURY##### OR BURIE## OR THERMOSET##### OR ENCAPSUL#####)
 L41 126 S ((L27 OR L28 OR L29) OR (L35 OR L36) OR L38 OR L40) AND DIRECT#####
 L42 6 S L41 AND SECOND(3A)(DIE OR ATTACH#####)
 L43 7 S L41 AND SECOND(3A)(CHIP OR MICROCHIP)
 L44 8 S L41 AND SECOND(3A) SURFACE
 L45 7 S L41 AND SECOND(3A)(LAYER OR FILM)
 L46 2 S L41 AND SECOND(3A)(ADHE##### OR GLUE#### OR GLUING)
 L47 84 S L27 OR L38 OR L40 OR (L42 OR L43 OR L44 OR L45 OR L46)
 L48 43 S L47 AND SECOND
 L49 0 S L30 AND (MULTICHIP OR MULTIPLE CHIP OR MCM OR STACK####(2A)(CHIP OR MICROCHIP OR MODULE))
 L50 82 S L30 AND (MULTICHIP OR MULTIPLE CHIP OR MCM OR STACK####)
 L51 11 S L50 AND SECOND

FILE 'WPIX, JAPIO, HCAPLUS' ENTERED

L52 53 S L48 OR L51
 L53 53 S (L42 OR L43 OR L44 OR L45 OR L46) OR L52
 L54 2 S L53 NOT P/DT
 L55 245 S (L27 OR L35 OR L33 OR L38 OR (L40 OR L41 OR L42 OR L43 OR L44 OR L45 OR L46 OR L47 OR L48 OR L49 OR L50
 OR L51 OR L52 OR L53 OR L54))
 L56 16 S L55 NOT P/DT
 L57 16 S L54 OR L56
 L58 SEL PLU=ON L57 1- RN : 136 TERMS

FILE 'REGISTRY' ENTERED

L59 136 S L58
 L60 7 S L59 AND SI/ELS,MAC AND O/ELS,MAC
 L61 7 S L59 AND (POLYMER OR THERMOSET### OR HOMOPOLYMER OR COPOLYMER OR MONOMER OR POLY)
 L62 14 S (L60 OR L61)

FILE 'WPIX, JAPIO, HCAPLUS' ENTERED

L63 16 S L57
 L64 SEL PLU=ON L63 1- AN : 31 TERMS

FILE 'HCAPLUS' ENTERED

L65 16 S L64
 L66 6 S L62 AND L65
 L67 10 S L65 NOT L66
 E MULTICHIP MODULES/CT
 L68 8453 S MULTICHIP OR MULTI CHIP OR MULTIPLE(W)(MICROCHIP OR CHIP) OR TWO(W)(MICROCHIP OR CHIP) OR MCM
 L69 28 S L68 AND SPACER
 L70 SEL PLU=ON L69 1- RN : 74 TERMS

FILE 'REGISTRY' ENTERED

L71 74 S L70
 L72 17 S L71 AND SI/ELS,MAC AND O/ELS,MAC
 L73 74 S L70
 L74 3 S L73 AND (POLYMER OR THERMOSET### OR HOMOPOLYMER OR COPOLYMER OR MONOMER OR POLY)

FILE 'HCAPLUS' ENTERED

L75 8 S (L72 OR L74) AND L69
 L76 795 S L68 AND DIRECT####
 L77 36 S L68 AND DIRECT#### AND ATTACH#####
 L78 SEL PLU=ON L77 1- RN : 965 TERMS

FILE 'REGISTRY' ENTERED

L79 965 S L78
 L80 30 S L79 AND (POLYMER OR THERMOSET### OR HOMOPOLYMER OR COPOLYMER OR MONOMER OR POLY)
 L81 965 S L78
 L82 12 S L81 AND SI/ELS,MAC AND O/ELS,MAC

FILE 'HCAPLUS' ENTERED

L83 19 S ((L80 OR L81)) AND L77
 L84 10 S (L80 OR L82) AND L77
 L85 64 S (L69 OR L75 OR L77 OR L84)
 L86 62 S L85 NOT L65
 L87 3 S L86 AND WITHOUT
 L88 9 S L86 AND SECOND
 L89 9 S L88 NOT L87
 L90 32 S L86 AND (BETWEEN OR INTERPOS##### OR INTERLAYER##### OR ATTACH#####(4A)(DIE OR CHIP OR MICROCHIP))
 L91 23 S L90 NOT (L87 OR L88)
 L92 27 S L86 NOT (L87 OR L88 OR L89 OR L90 OR L91)
 L93 0 S L92 AND SANDWICH#####
 L94 0 S L92 AND SECOND(W)(CHIP OR MICROCHIP OR DIE)
 L95 0 S L92 AND SECOND

FILE 'WPIX, JAPIO, HCAPLUS' ENTERED

L96 229 S L55 NOT L57
 L97 59 S L96 AND SECOND
 L98 10 S L97 AND (TWO OR SECOND OR ANOTHER OR THINNER)(3A)(GLU##### OR ADHE##### OR INTERL##### OR INTERPOS##### OR ATTACH#####)
 L99 15 S L97 AND (TWO OR SECOND OR ANOTHER OR THINNER)(3A)(INSULAT#### OR OXIDE OR DIELEC#### OR SIO OR SIO2 OR DIOXIDE OR THERMOSET#### OR PROTECT#### OR COVER##### OR ENCAPSUL##### OR BURY### OR BURI####)
 L100 23 S (L98 OR L99)
 L101 3 S L96 AND (PERIMET##### OR PERPHER#####)(4A)(DIE OR CHIP OR MICROCHIP OR BOND##### OR WIRE#####)

FILE 'DPCI' ENTERED

L102 123 S (US 6340846 OR US5323060)/PN.D
 L103 SEL PLU=ON L102 1- PRN : 159 TERMS

FILE 'WPIX, HCAPLUS, EUROPATFULL, PCTFULL, JAPIO' ENTERED

L104 276 S L103
 L105 17 S L104 AND SPACER
 L106 3 S L105 AND SECOND(3A)(ATTACH#### OR GLU##### OR ADHE##### OR BOND####)
 L107 1809 S SECOND(3A)(ATTACH#### OR GLU##### OR ADHE##### OR BOND####) AND DIRECT####(10A)(CHIP OR MICROCHIP OR DIE)
 L108 1 S US20030111716/PN
 L109 SEL PLU=ON L108 1- IC MC : 6 TERMS
 L110 41195 S L109
 L111 47 S L107 AND L110
 L112 41195 S L109
 L113 8 S L105 AND L112
 L114 33 S L111 AND (BONDWIRE### OR WIREBOND### OR WIRE(2A) BOND#### OR BALLBOND#### OR BOND####(2A) BALL)
 L115 12 S L114 AND (SPAC#### OR GAP OR GAPP#### OR THICKNESS)/TI,AB,CLM
 L116 0 S L114 AND (SPAC#### OR GAP OR GAPP#### OR THICKNESS)/ABS,ABEN
 L117 22 S L106 OR L113 OR L115
 L118 815 S FLUSH(6A)(CHIP OR MICROCHIP OR DIE)
 L119 3843 S FLUSH(6A)(THERMOSET#### OR INSULAT#### OR BETWEEN OR INTERL##### OR INTERPOS##### OR OXIDE OR SIO OR DIOXIDE OR SIO2 OR SILICA OR ENCAPSULANT)
 L120 97534 S (CHIP OR MICROCHIP OR DIE)(6A)(THERMOSET#### OR INSULAT#### OR BETWEEN OR INTERL##### OR INTERPOS##### OR OXIDE OR SIO OR DIOXIDE OR SIO2 OR SILICA OR ENCAPSULANT)
 L121 179167 S (MCM OR MULTICHIP OR STACK#### OR (MULTI OR MULTIPLE)(2W)(DIE OR CHIP OR MICROCHIP))/TI,ABS,ABEN,AB
 L122 51 S L118 AND L119
 L123 351 S L118 AND L120
 L124 31 S L118 AND L121
 L125 109 S L119 AND L120
 L126 52 S L119 AND L121
 L127 2361 S L120 AND L121
 L128 36 S L122 AND L123
 L129 3 S L122 AND L124
 L130 2 S L128 AND L129
 L131 2 S L122 AND L127
 L132 3 S (L129 OR L130 OR L131)
 L133 36 S L122 AND L120
 L134 3 S L122 AND L121
 L135 20 S L123 AND L124
 L136 11 S L125 AND L126
 L137 20 S L123 AND L121
 L138 0 S (L133 OR L134 OR L135 OR L136 OR L137) AND (WIRE BOND#### OR WIREBOND#####)/TI,AB,ABS,ABEN
 L139 18 S (L133 OR L134 OR L135 OR L136 OR L137) AND (SECOND OR TWO)/TI,AB,ABEN,ABS
 L140 18 S L139 NOT L132
 L141 2 S L140 AND (BOND#### OR ATTACH##### OR DIEBOND####)/TI,AB,ABS,ABEN

FILE 'INSPEC' ENTERED

E MULTICHIP MODULES/CT
 L142 8547 S "MULTICHIP MODULES"/CT OR MCM OR MCM OR MULTI CHIP OR MULTICHIP
 L143 518 S L142 AND 2000/PY
 L144 11 S L142 AND FLUSH
 L145 0 S L143 AND FLUSH AND WIRE BOND
 L146 0 S L143 AND FLUSH AND WIREBOND

FILE 'INSPEC' ENTERED

E WIRE BOND/CT

E LEAD BONDING/CT

L147 4360 S "LEAD BONDING"/CT OR "TAPE AUTOMATED BONDING"/CT OR WIRE BOND##### OR WIREBOND#####
 L148 22 S L147 AND L143
 L149 33 S L144 OR L148
 L150 0 S L149 AND PY>2001
 L151 3 S L149 AND INSULAT#####
 L152 167 S INSULAT#####(6A)CHIP
 L153 14 S INSULAT#####(6A)MULTICHIP
 L154 1 S INSULAT#####(6A)MICROCHIP
 L155 706 S (L143 OR L144) OR (L148 OR L149 OR L150 OR L151 OR L152 OR L153)
 L156 529 S (L143 OR L144) OR (L148 OR L149)
 L157 4 S (L152 OR L153 OR L154) AND L156

FILE 'INSPEC' ENTERED

L165 517 S L142 AND ATTACH#####
 L166 344 S L142 AND ATTACH#####(4A)(CHIP OR MICROCHIP OR DIE)
 L167 460 S L142 AND BOND#####(4A)(CHIP OR MICROCHIP OR DIE)
 L168 1 S (L165 OR L166 OR L167) AND FLUSH
 L169 34 S (L165 OR L166 OR L167) AND THICKNESS
 L170 38 S (L165 OR L166 OR L167) AND SECOND
 L171 159 S (L165 OR L166 OR L167) AND TWO
 L172 33 S (L165 OR L166 OR L167) AND INSULAT#####
 L173 14 S (L165 OR L166 OR L167) AND THERMOSET#####
 L174 13 S (L168 OR L169 OR L170 OR L171) AND (L172 OR L173)

FILE 'JICST-EPLUS' ENTERED

L175 1891 S MCM OR MULTI CHIP OR MULTICHIP
 L176 95 S L175 AND PY=2000
 L177 0 S L175 AND FLUSH
 L178 90 S L175 AND INSULAT#####
 L179 0 S L175 AND UNCONNECT#####
 L180 0 S L175 AND NONCONNECT#####
 L181 53 S L175 AND THERMOSET#####
 L182 9 S L178 AND L181
 L183 0 S L176 AND L182
 L184 3 S (L176 OR L177 OR L178) AND ATTACH#####
 L185 0 S L175 AND SPACER